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AMERICAN JOURNAL OF PHOTOGRAPHY

AN ILLUSTRATED MONTHLY,
DEVOTED TO PHOTOGRAPHY
IN ITS WIDEST SENSE. ❦ ❦ ❦ ❦



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ILLECELLEWAET AND ASULKAN GLACIERS
GLACIER HOUSE, BRITISH COLUMBIA

BY GEO. AND Wm. S. VAUX, JR.

AMERICAN JOURNAL OF PHOTOGRAPHY

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PERSPECTIVE AND MISUSE OF THE WIDE ANGLE LENS

ARTHUR CLAPHAM



CONTRIBUTOR to the pages of the last number of the AMERICAN JOURNAL OF PHOTOGRAPHY says:—"Painting and the recent artistic school of photography instead of selecting as subjects views representing miles and miles of prospect, see more effective themes in what are called the 'little bits' in a landscape; strips of marshes, meadow lands, confined interiors of woods, a few sheep by a hillside, a clump of bushes, etc. Individuality, sentiment, personal feeling, the man himself is better brought out than in grand canvases of mountain peaks or illimitable prospects."

The writer is illustrating the importance of artistic perspective and I think he should have given emphasis to the paragraph quoted above by showing that the predilection for the "little bits" is the result of necessity, occasioned by the difficulty of securing in illimitable prospects, artistic beauty in conjunction with natural truth of perspective. There is a difference between artistic perspective and geometric perspective, and the painter of taste always sacrifices the latter to the former when delineating miles and miles of country, that is, in giving, as the photographer would say, a wide angle view.

The little bits are, therefore, narrow angle views or pictures made so to say, with a long focus eye.

The outcome of the lesson from these principles of perspective is, that to secure artistic effect, the photographer should tend to include in his pictures a narrow rather than a wide angle, and hence to use a long focus lens and not endeavor to secure enlargement by approaching unduly near his subject.

It is true also that a good deal of the impressiveness of the picture depends upon the height of the horizon, that is, it should tend rather to fall below the middle line of the picture than above or at the middle; but it is not always possible for the photographer to lower very much below the middle line his horizon, even though he place his camera on the ground.

On the sea coast, for instance, the raising or lowering of the camera does not materially effect the position of the horizon in the picture. The case is the same with any other distant horizon.

With subjects where near objects form a part, a change in the height of the camera will make a difference in the position of the horizon.

When figures are introduced on the scene the position of the horizon is a matter of considerable importance.

If the camera is placed high so that the horizon intersects the heads of the figures the effect is generally unpleasant.

The glaring incongruities of background and subject, which used to furnish a fertile theme for the scornful pen of the art critic, nowadays rarely excite our sense of the ridiculous.

This improvement in judgment, or rather appreciation of the eternal fitness of things, is to be ascribed to the improvement in education of the photographer, effected by the publication during the last quarter century of so many good books on art in photography.

The landscape scenery now employed as a setting to the living subject often displays much taste and skill on the part of the scenic artist in the subordination of parts which would be too obtrusively rendered in the photograph. However, one does frequently see a wrong application of the background to the subject, not offensive in incongruity, but still annoying to the sense of those who have an intuitive or acquired understanding of the principles of artistic perspective. I refer particularly to the placing of the subject against the horizon line of the scene.

If the horizon of the background is placed for a certain size of figure, and the photographer poses his subject so that the line comes too far above or below the head, the whole picture is rendered ridiculous and impossible.

If the horizon is greatly depressed, the apparent greatness of the figure makes us tremble for the fate of the poor little houses or the pigmy sheep, lest, inadvertently, he or she should step back upon the Lilliputian world.

If the horizon is raised inordinately, we are inclined to fear lest the mountain crush our pigmy.

Fortunately the indifference with which photographers regard the relation of horizon to subject does not often make the picture very glaring or offensive, because the horizon line in the background is generally softened to such a degree as to tone down its obtrusiveness in the resultant photograph, and generally it is well to have an indefinite horizon, but it is also well to have that horizon in accordance with the dictates of common sense.

The height of the camera is a subject which seems to attract but little attention from the photographer. A good point of view with him is generally the *sine que non*, and this secured, he thinks his composition complete, whereas it might be further improved by a little difference in the height of his tripod legs.



FIG. 1

FIG. 2

In a little work intended for beginners in art, by Tristram Ellis, entitled "Sketching from Nature," published by Macmillan & Co., there are several drawings which aptly illustrate the different effects produced by raising or lowering the horizon with relation to the figures in the landscape.

The position of a figure against the horizon at a distance of thirty feet, seen when the artist was standing is represented in fig. 1.

The same figure at the same distance drawn when the artist was kneeling is shown in fig. 2.

Observe how in the latter sketch the landscape is reduced in vertical height, so that the horizon comes about the centre of the back instead of about the shoulders as in the former sketch—to the improvement of the subject.

The figure seems more harmoniously placed with respect to the middle ground and the distance.

The effect of placing the eye at different heights rela-



FIG. 3



FIG. 4

Effects Produced by having the Figure too near the Eye

tive to the figure, the accompanying cuts will illustrate, (figures 3 and 4), representing photographs taken fifteen feet from the sitter at two different elevations.

The first sketch represents the appearance of the figure with the eye five feet from the ground or the average height at which the camera is placed. The head and upper part of the body appear too large for the legs and the hands look particularly big. According to the laws of perspective this is correct. The second sketch, fig. 4, shows the appearance of the figure when the

camera is only two feet from the ground. Observe how tall it makes the figure look, because the perspective reduces the size of the head and shoulders. It will thus be seen that there is considerable difference produced in the appearance of objects by a trifling change in the height at which the observer views them. Of course good judgment dictates the proper elevation with respect to the distance from which objects are viewed.

Correct power of observation in judging of the relative size of the different parts of the human figure is not possessed by every painter. Sometimes he is unfair when he justifies his distortion by pleading the demands of artistic vision, condemning indiscriminately all photographic lenses. But the lens is sometimes faithful in its delineation, the artistic critic off his cue, in his sweeping condemnation of optical shortcomings.

Feet are generally much larger in proportion to the figure than most people imagine, and many a pair of hands has been unjustly ridiculed in a photograph for their enormity when they were true to nature, that is even artistic nature, if one may be permitted to use for the nonce such a term.

The photographer probably may have lacked discretion in posing them so obtrusively as to offend, on the principle, that the truth though it be the truth is not always to be told.

Leslie tells this story about the Duke of Wellington: "When I had sketched his figure I asked him to look at it. He said, 'You have made my head too large and that is what all the painters have done to whom I have sat.' 'Painters,' he continued, 'are not aware how very small a part of the human figure the head is when the figure is posed so as to give the proper relations of the different members.'"

The great Duke undoubtedly was not great in his criticism, physiological or artistic. Inferior painters always paint the head too small. We are apt to criticise a portrait by photography when it gives the seat of intellect any thing like its just proportions.

In reading over what I have said I notice that some misconception might arise from the use of the terms wide angle and long focus.

Long focus, optically means that property of the lens which, whatever its focal length may be, prevents it from covering any other dimensions than those included in a narrow angle, or in other words a small plate. This may look like a great disadvantage to the photographer for the great question with him is,

"what size plate will the lens cover?" It is just here he defeats his efforts after pictorial effect with his lens. In fact, lens makers and lens dealers are in the bad habit of calling lenses 8 x 10, 4 x 5 or 6 x 8 etc., as if the lens was constructed for the particular size of plate.

It is by this means that a wider angle is generally selected than is intended. With the same form of lens, a long focus will give only a narrow field, but with the narrow angle the great advantage of pleasing perspective is gained.

A lens which covers a plate whose longest dimensions considerably exceeds the focal length of the lens, will effectually ruin the best conceived composition by exaggerated perspective.

Even in a single lens of considerable focal length the distortion is but slight, and though I would not recommend such a lens for architectural work I would much prefer to take a portrait with it than with the highest price and most skilfully made short focus lens.

MM. Curie and Bemont announce in the pages of *Comptes Rendus* the discovery of a new substance, which emits radiations that have been thought to be peculiar to uranium. The substance is found in pitchblende, an ore of uranium, and the discoverers suggest that it is a new element proposing the name "polonium."

The chloride of polonium is claimed to be 900 times as great as uranium in emission of radiative energy.

M. Demarçay has found in its spectrum a ray which does not appear to be due to any known element. This ray, scarcely visible with the chloride 60 times more active than uranium, is notable with the chloride concentrated by fractionation to an activity 900 times that of uranium. The intensity of this ray augments, therefore, with the radio activity, and this is considered a very serious reason for attributing it to the radio-active portion of our substance.

Uranium, thorium, polonium, and radium and their compounds, render air a conductor of electricity, and act photographically on sensitive plates. From these points of view polonium and radium are considerably more active than uranium and thorium. On photographic plates the discoverers obtained good impressions with radium and polonium in half a minute. It requires several hours to obtain the same result with uranium and thorium.

The rays emitted by compounds of polonium and radium render barium platino-cyanide fluorescent. Their action in this respect is analogous to that of the Röntgen rays, but is considerably more feeble.

PHOTOGRAPHIC ART CRITICISM

WE believe that it is a difficult matter to criticise aright, and it often seems presumptuous to sit in judgment upon work the like of which we ourselves are not able to produce. What is left us, critics? Each his suffrage, nothing more.

But let us bear in mind that in venturing our opinion as to the merits or defects of any work, that to a clear and instructed eye, our opinion shows plainly enough our range of apprehension and insight, whether broad or narrow, but nothing at all of the relative value of the work with reference to other works.

It is strange in what respect the opinion of the critic is held by the exhibitor, when in the majority of cases the criticism is rendered without due consideration or without competent knowledge. The picture is generally approached in a false position when the judge comes to criticise it.

We criticise because we are afraid to admire amiss. It is our duty to come to learn from the picture if it has had merits enough to get it a place on exhibition. The critic is generally afraid that he himself will be thought lacking in judgment and artistic perception if he should admire something not generally considered admirable. So the critic is all the time thinking more about himself than the picture.

Most photographers instinctively feel, and sometimes give candid expression to their feeling, that photographic criticism is for the most part worthless in itself to the artist who listens to it.

We would say to the critic and to ourselves at the same time, do not think it devolves upon you to think or feel about the picture. Let the picture instruct you and when you have learned from it all it can teach you, tell the public the lesson you have received. In this way you shall come to enjoy the picture and find such criticism very different from fault finding or venturing observations about the violation of set rules of art, etc.

If a work is not worthy of being studied for the lesson it will give—it may be worth consideration but not worth criticism.

After this, what shall we say concerning Mr. Alfred Holden's pictures which we present as illustrations to this issue of our AMERICAN JOURNAL OF PHOTOGRAPHY? Simply that we are not capable of producing as good work, and we might venture to say neither is the critic. So we shall enjoy them and seek for the lesson they shall convey and we trust our readers will go and do likewise.

DISTORTION IN PICTURES OF INTERIORS

HENRY ALBERTSON

IN this contribution the remarks on interior distortion shall be confined to that phase occasioned by the exaggeration of perspective—reserving, with the editor's permission, until another time the consideration of bad effect produced by improper use of the swing back in architectural interiors.

A photographer once thought he was rapping the writer severely over the knuckles because he urged photographers to employ in portraiture a long focus lens—the photographer contending that the lens was mathematically correct and that one should always view the picture with the consideration in mind, that it was taken under the conditions which demanded that it should be seen at very close range. Of course such a critic deserved no reply.

My object, however, is to call attention to the fact that even painters, who have come to understand the great value photography possesses of quickly furnishing them with the perspective of a room, which they could only secure after many hours of patient geometric drawing and accurate measurement, sometimes too implicitly accept the perspective the lens gives, and imitate its most glaring faults for they are artistically faults despite their mathematical assurance of verity.

The use or rather the abuse of wide angle lenses is responsible for this violent perspective. In looking back to the pictures by the early painters just after the discovery of the principles of perspective, we see that the painters frequently overdid the thing in their enthusiasm, or perhaps in their pride, to exhibit their knowledge. Just as in certain photographs of interior architecture we often see the point of distance chosen, which brings one of the vanishing points within the picture, that is representing the rectangle obliquely to the plane of the picture, so we see it represented in the works of some of the painters; but in both instances there is an apparent want of truth, and certainly the perspective should be so managed as not only to be true, but to also look true. The ceiling of the Night-cellar in which Hogarth's "Idle Apprentice" is taken into custody is a glaring and striking instance of false perspective arising from the placing of the vanishing point of the beams within the composition; and indeed this is far from the only instance of such carelessness in

this great artist, who yet took the special trouble to publish a print in which he points out some of the gross errors consequent upon ignorance of perspective.

I am not here criticizing Hogarth since I highly appreciate the facility and taste he displays in composition, but some of his interiors would have been truer or more pleasing in effect had he been less punctilious in placing his point of distance farther from the plane of his pictures.

In one of Hogarth's most admirable works, the breakfast scene of the "Marriage à la Mode," the distortion is painfully manifest.

Neither the floor nor the ceiling appears to be level unless the eye is placed so close to the picture as to prevent one from seeing anything in it distinctly. The Dutch painters usually manage more effectively their views of interiors—having perspective more directly under the control of good taste.

With the photographer, a knowledge, that is a technical knowledge, of the principles of perspective, is not necessary. An ability, for instance, to execute mechanical drawings to scale might train his eye in judgment, but the labor of perspective drawing is saved him by the work of his lens, and he cannot by any means change what it gives him, but he can select or adapt the view frequently, so as to modify the effect of perspective



Mantel in Representatives' Reading Room—
Congressional Library

J. WESLEY ALLISON

considerably—one way I touch upon above, where we should prefer parallel to oblique perspective which greatly assists the level look of the floors and ceilings.

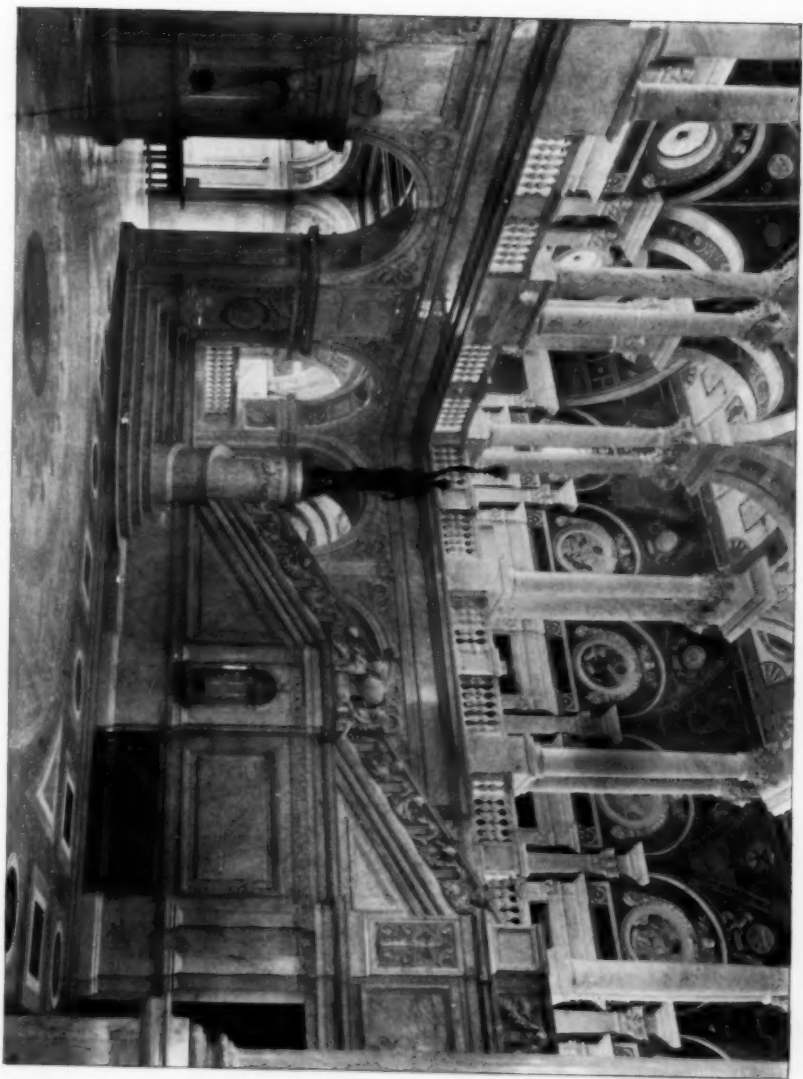
The plane of the picture itself is subject to the laws of perspective and becomes altered more or less in shape according to the point from which we view it and carries with it all the lines on the surface that are parallel with or perpendicular to the horizon just as our vision shows it, and just as a properly selected lens would do. But it is not always that the desired lens can be



Corridor Back of Main Entrance Hall—Congressional Library J. WERLEY ALLISON

used in photographing interiors, as a proper focus lens cannot always be brought into requisition.

Views of large rooms or public buildings, libraries, etc., are not particularly difficult subjects to photograph and so one can better secure the perspective which is agreeable to the eye; but in small places, living rooms, and studios which the photographer is called upon to take he is sometimes put at his wit's end to get a point of sight which shall not give exaggeration. There is no room to place his camera, that is, he cannot technically speaking, "get back far enough" to remove the camera from objects right under the lens.



Stairway, Main Entrance Hall—Congressional Library

J. WENTLEY ALUSON

The chairs, stools, etc., near the camera are disproportionately large and objects only a short distance from them in reality are unduly dwarfed.

The floor too seems to run up hill, yet all this is mathematically true and if a skilled artist were asked to draw that room from that point and with the same angle he would doubtlessly, if he wished to ostentatiously exhibit his knowledge, draw it as the lens delineates it on the ground glass.

But you will say how are these impositions of the lens perspective to be overcome? First by using as narrow an angle lens as possible. Generally, photographers, to get in as much as possible in interior work, select a lense giving frequently 120° .

The operator should take care to get back as far as possible and also to remove from proximity to the lens, chairs and other objects which would be distorted. Generally speaking, considerable bare space in front adds to the dignity of the view (dignity being used in its etymological sense). The dignity likewise is made contributory by lowering the horizon, that is spreading out the tripod legs and bringing the camera down to a lower level than the height of the eye when standing.

The neglect to place the camera low, where the subject demands it, is exemplified in many a photograph where one object is immediately a little beyond the other but in the same line. By the perspective, the furthest removed object seems at an angle of 45° and about to slide, cellar-door-like, down upon the unfortunate object below. When such scenes represent a sheet of water with boats in it, the water looks so much like a precipitous fall that we tremble for the safety of the boats. The distant shore looks as if it were vomiting the deluge of water down on the boats from its black mouth.

I hope, in another issue, to show some examples from the painters illustrating how they manage interiors to make them true yet pleasing.

MARTINIQUE

JOSEPH C. ROOP

MARTINIQUE is one of the most interesting and beautiful of the Caribbee Islands. It is about forty miles in length, by some fifteen miles in width at its widest part, and presents a fine appearance from the sea, owing to its mountainous character, and its luxuriance of tropical vegetation.

About one-seventh or one-eighth of its population is white.

French is, of course, the language of the island, but it is only



Harbor of St. Pierre

J. C. ROOP

spoken tolerably pure by the whites, the language of the common people being a sort of mongrel jargon that is difficult to understand.

The negro population is rather disposed to be insolent and familiar. The negro women are very fond of dress and prefer gay colors, seeming to admire themselves and wishing to be admired by others. Many of them wear a profusion of jewelry, sometimes having immense ear-rings that seem barbarous in style, and, although their ornaments may be hollow and not so heavy

as they appear, yet they pride themselves on wearing only fine gold.

The laws of the island are very strict as to gold and imitation jewelry, and no jeweler dares to sell imitation or inferior gold for the standard article.

St. Pierre, the chief commercial town, presents a handsome appearance, lying at the foot of the hills, with a background of lofty mountains, in a circular sweep of the shore. The buildings



Street fronting the Bay, St. Pierre

J. C. ROOP

are larger and more pretentious than in most of the towns of the West Indies, and remind one somewhat of the cities of Southern Europe. Among the public buildings are a fine cathedral and a theatre. It has two, perhaps we might say three, principal streets, running parallel to the water, with numerous cross streets, some very much inclined as they ascend the hillsides, in fact some of them are a series of steps or stairways. The street nearest to the water is open for quite a distance towards the landing-place or bay, and is beautified by a quaint fountain and various tropical trees, in one place forming a grove or shelter from the sun, and is well provided with benches, which are generally well filled with idlers.

A tramway, as they call it, of very narrow guage, runs along this street, through the town, following the shore for several

miles. The cars are very small affairs, dilapidated and shabby, resembling in style our summer cars and holding only about a dozen passengers. The conductors are generally women, who sit on a seat like a passenger and carry a small whistle to give signals, and a satchel to hold tickets and money. The second street from the water contains the principal shops and stores.

The sidewalks are quite narrow and half of the people walk in



Tram Car, St. Pierre

J. C. ROOP

the street. The gutters are also narrow, but very deep, and have water running in them continually. They are, in fact, the only sewers of the town, carrying off the accumulated filth of the household, which is dumped into them every morning at daybreak.

One of the most picturesque sights of St. Pierre is a stream of water that comes down from the hills, running across the town and into the sea. It is lined on both sides with quaint old houses, and early in the morning crowds of washerwomen swarm along the water, pounding the clothes on the stones and chattering like so many parrots.

There are many delightful drives in the mountains, where one can view the grand tropical foliage and the lovely views over the sea.

Martinique (and also the neighboring island of St. Lucia)

is cursed by the presence of a very venomous snake, the bite of which is almost invariably fatal in a short time. It is called the "fer de lance," meaning the iron point of the lance or spear. It is very plentiful, and many deaths result annually from its bite. It gives no warning and is very aggressive. It is almost impossible to get any of the colored people to venture into the thick foliage, and, in fact, in some parts of the country the people will not venture from their homes at night, for the "fer de lance" is a nocturnal Rambler.



Street in St. Pierre

J. C. ROOP

The seat of government of Martinique is at Fort de France, located on a land-locked bay, some 20 miles to the south of St. Pierre, and it has two names, according to the fashion of the times. When France is a monarchy it is called Fort Royal, but when a republic the name is Fort de France. It is a quiet place, of little commercial importance, and were the seat of government removed to St. Pierre, as some would have it, the town would go to decay, and so the shrewd Frenchmen keep the seat of government there.

The town is situated on a level plain and the hills here recede from the shore for some distance. There are more whites here in proportion than at St. Pierre, and the people are more dignified and courteous.



Fort de France, from the Landing

J. C. ROOP



Stream, St. Pierre

J. C. ROOP

The Cathedral is quite an imposing building, with the top of the spire constructed of open or skeleton iron work in order to better withstand the earthquakes and the hurricanes that sweep over the island in the summer and fall months.

The country here is not so mountainous as at the north end of the island, and while sugar cane and tropical fruits abound yet there are occasional patches of barren ground.

But the glory of Fort de France is the beautiful statue of the Empress Josephine which stands about a quarter of a mile from the landing place, on a level grassy spot, surrounded by a circle of tall palm trees.



Palm Trees and Statue of Josephine

J. C. ROOP

Josephine was not born in the town, but some four or five miles away across the bay, the distance by land being very much longer, so the journey to her birthplace is generally made by boat to a small village called "Trois Ilets," (The Three Islets).

There, in the church, her parents were married, she was baptized, and her mother lies buried. About a mile or so from the town in a narrow valley running up from the sea, is the secluded spot where she was born. The place is still known as La Pagerie, the family name.

The house in which she was born was afterwards destroyed by an earthquake, leaving the kitchen as the only part remaining of the original building. This occurred when she was about three years of age, and the sugar house only being partly destroyed, the family lived in it for some time, while the house

was being rebuilt, as far as possible out of the remains of the old. The estate of La Pagerie was then large and profitable, employing about one hundred and fifty slaves in the cultivation of sugar cane and coffee. The statue of Josephine is enclosed with an ornamental iron railing, and on the front of the pedestal is a handsome bronze tablet representing the famous coronation scene, when Bonaparte surpassed all preceding coronations in magnificence, summoning the aged Pope Pius the Seventh from Rome to assist in his coronation. The tablet shows the Emperor in the act of removing the crown from his own head where it has just been placed by the Pope, to the head of the kneeling Josephine. On the remaining three sides are various inscriptions and dates. The statue is a work of art, and moreover, there is a beauty and fascination about it that almost overpowers the beholder.

The statue faces the sea, but the head is turned towards the Trois Ilets, while her left hand rests upon a medallion of Napoleon. It is only the statue of a woman standing alone, recalling no heroic action nor great deed performed, but there lingers about a purity and almost angelic beauty as she stands there looking towards the place of her birth and her happy childhood, with a sweet wistful longing look such as I have never seen on the face of any other marble, (and I have seen nearly all the masterpieces of the galleries of the Old World) the memory of which will haunt the beholder as long as life shall last.



Statue of Empress Josephine, Fort de France J. C. ROOP



February Blizzard—Broad Street, Philadelphia

D. SERGEANT BELL



February Blizzard—Snow Plow at Work, Philadelphia

D. SERGEANT BELL

DRESS AND DRAPERY

“**A**S the beauties of the mind are seen through and adorned by language, so are the graces of the figure set off by drapery”—so wrote Flaxman, the great English sculptor; and is not the comparison an apt one? We are all familiar with his beautiful outlines, depicting scenes and incidents from the Greek poets and from Dante.

One hardly knows which to admire more, the vigorous lines of Chapman's translation of Homer, or the manner in which Flaxman gives life and motion to his flying and running figures, at times poised in the air, or cutting through it with extreme rapidity, or gently and gracefully floating through space, the whole effect being produced by the skilful management of the garments.

In many respects there is a closer analogy between sculpture and photography than between it and painting. The horses of the Elgin marbles are without doubt the closest possible copies of well-chosen living specimens. Nothing is omitted any more than in a good photograph. Greek sculpture furnishes many invaluable suggestions for the disposition of the drapery about the human figure, but in our imitation of the antique, we must bear in mind, that though the analogy is close between sculpture and photography, so far as the realistic presentation of nature is concerned, yet photography, like painting, is more limited in its scope for representation of motion, so that it would be entirely out of place for a photograph or a painting to represent a human figure arrayed in a garment closely adhering to the limbs, showing the form distinctly through it, because the clinging of the garment, demands an explanation when the motive of the picture does not suggest motion from the wind, or some other agent.

We sometimes see photographs of human models simulating Greek statuary, clad in close, clinging garments, but represented in repose, so that one is at a loss to understand why the garment about the lower limbs is shown in a tense condition, while the upper garments, by the placid folds, indicate complete rest.

Now, when the antique represents a statue in repose, the amplitude of the folds of the drapery entirely conceals its figure. The statuesque photograph savors much of the sensational, even if it is not vulgar or ridiculous. It is altogether out of the province of photography to suggest the indefinable beauty of the

plastic by whitewashing the real. There are many applicable suggestions about the beauty of drapery to be derived from the painters.

It would be a long list to mention all the painters who delight us with the grace of folds and hangings, both in the figure and in the drapery of the background. We might point to the flowing robes of Titian's "Assumption," the dress of DaVinci's "Mona Lisa," to the splendid brocades and satins in the pictures of Paul



By the Candle's Yellow Light

ALFRED HOLDEN
WISSAHICKON, PHILA.

Veronese, Reubens, Velasques, etc. To take suggestions from these masters will be much more instructive than to try to make Galateas, Dianas and Psyches instinct with life, with a self-satisfied expression, clothed in tissue and mounted on wooden blocks painted white to look like marble.

Greek mythology, beautiful as it is in its poetic significance, has entirely died out of our poetry, though it still lingers in art.

There is abundant material for the expression of artistic feeling in our modern every-day life. We can find pictures in our drawing-rooms, our parlors, our social gatherings, our workshops, in



ALFRED HOLDEN, WISSAHICKON, PHILA.



La Dame au Velours Noir

GEORGE W. NORRIS

the busy street scenes, where there are frock coats and flounces instead of togas and chitons.

We can call to mind numerous paintings, mostly by French and American painters, of scenes and incidents of our modern so-called artificial life, quite as charming as mystic maids or inspired shepherdesses. Of late years there has been a wonderful advance in the art side of photography, but even in some of the most beautiful of the recent productions which have graced our salons, we have noticed a disregard of the value and importance of drapery and costume, or an affectation which suggested the dreamy sentimentality of the imitators of Rossetti.

We must have taste ourselves and go direct to nature and imbibe fresh draughts from the painters who delight in the delicacy of light and shade in drapery and dress. Did the photographer ever stop and consider what grace is added to an attitude, in itself graceful, by length of line to a robe, and how often grandeur is imparted to a figure, in itself ordinary, by the skill in the disposition of the lines of the folds of the dress?

There is a special elegance in the long, flowing lines of a lady's habit, more becoming to her native grace than all the devices made of crumpled tissue, in which a lady is never seen, except when she comes under the hands of the artistic photographer.

It is true that many an ungainly form dissembles under an artfully contrived costume, so that one is tempted to extend the witticism of Talleyrand, and say that drapery, like language, is more serviceable in concealing than in revealing. Still, there are those who have so large a share of inborn, or else acquired, grace, that the most ordinary garment, like the tarnished, gold-laced hat and huge cockade of flimsy taffeta of Uncle Toby, "though not worth a button in themselves, become the person the moment he puts them on and seem picked out by science to set him off to the greatest advantage."

The photographer may here retort: "But these gentle folk of nature, Sterne speaks of, are not nowadays so plentiful. We are obliged to deal with all sorts and conditions of men, to make the best of what fashion chooses to suggest, or the whim of the sitter dictates."

We might say in reply: "Do as the painters do, or did, to the changes of fashion, and still give us something beautiful." Gainsborough, Reynolds, and others of a period of absurdity of

fashion far above our day, were able to turn to good account the eccentricities of their times. Nowadays no one can complain very loudly of any lack of artistic feeling in dress.

Fashion is controlled more directly by taste, and springs more immediately from the demands of utility and comfort than ever it did before.

Dress, however, like new honors, requires the aid of use to make it set well upon us. When Autolycus appears strutting about in the Prince's dress, the shepherd remarks that "his garments are rich, but he wears them not handsomely." Some people are awkward in the most elegant dress, but even ordinary attire on others disposes itself gracefully. The old masters, like the photographers, were troubled by ungraceful subjects.

There is a picture by VanDyke, of a lady who probably persisted in wearing a very outlandish-looking dress, for VanDyke would never have asked her to don such a one. If the painter had given it any prominence in the picture it would have neutralized even the genius of VanDyke. But his skill and taste enables him to get over the difficulty and yet give us, not only a pleasing, but a beautiful work of art.

By means of a light ground, opposite the light side of the dress, and by help of a curtain, which catches and emphasizes the light near the figure he has drawn away attention from the uncomely dress and made the effect of the whole picture full and rich to the eye.

He did not have recourse to color-legerdemain for the effect, but to masterly management of light and shade, not entirely beyond the resources of the photographer.

In a full length figure, a perfectly plain background is difficult to manage, so as to give atmosphere, as if the figure had air around it. Drapery is of great value in such a case and frequently its disposition suggests relief, and the figure does not look as if it was plastered to the background. The background may help to relieve parts that need relief and to soften down portions which need toning. You can easily see how it is possible to lose the bad side of the figure in the darker folds of the drapery, showing a different source of illumination without presenting the incongruity so often seen in a figure against a plain background, where the shadow on the ground is made to relieve the high light of the figure.

Backgrounds and drapery are closely allied subjects, but the former ought to have a paper devoted to it alone, and we shall here merely refer to Raphael as a master beyond most others worthy of study, both for background drapery and dress of figures.

To make this paper practical, since it has been only suggestive, we shall say a word about the textural rendering by photography of the various stuffs best suited for drapery.

All material of a soft, flexible nature, like woolens, cashmere, merino, nun's veiling, chiffon, India muslin, thin silks, Persian lawn, etc., lend themselves readily to making beautiful folds. But your fair friends can aid you there. Plushes and velvets, though they look well to the eye, do not photograph well. It is very difficult to get any gradation of half-tones.

We are writing on drapery, but we would give the advice not to sacrifice the half-tones of the faces to secure brilliancy of the garment. Look to the perfect development of the countenance first, and, if necessary, have recourse afterwards to local reduction or intensification for harmonizing the lights and shades of the background drapery or the dress.

Light draperies and clothing will give you the most trouble, but a little judgment will enable you to control both values.

THE MAN WITH A THEODOLITE

FREDERICK GRAFF

It was a land surveyor,
With his mysterious load
Of bright three-legged instruments,
Came striding down the road.

And just before the district school
He paused, to take "a sight,"
And all the children came and stared
At his theodolite.

The little school ma'am hurried out,
To see what caused the stir,
And one and all they took the man
For a photographer.

And "Oh!" the little school ma'am cried,
"How happy I should be,
If you would take our likenesses,
My scholars all and me."

The man (he was a wily wag)
Replied, "'Twould cost a sight,
To photograph a district school
With a theodolite."

But still the little school ma'am begged,
And longed to have her way;
She searched her pocket book and found
Two dollars she could pay.

He said, "Although that is'n't much,
For taking such a view,
You're so hard up for likenesses,
I guess I'll make it do."

The school ma'am scrubbed her little ones,
With lavish soap and care,
And straightened up their pinafores,
And slicked their stubborn hair.

And then it was a goodly sight,
To view that stiff thirteen;
Six girls and boys on either side,
The school ma'am in between.

His big bandanna then he spread,
And 'neath it took a look,
And sighted them sufficiently,
And laughed until he shook.

Then drawing forth his levelling book,
Therein with wondrous care,
Her name and her address he took,
And promised then and there

The finished pictures soon to send,
Nor waiting for the pay,
This graceless wight took up his traps,
And hurried on his way.

Of course the picture ne'er was sent,
'Twas empty promise, nothing more,
To these thirteen confiding ones,
Grouped round the schoolhouse door.

My photographic friends a moral take,
Ne'er promise prints you'll never make,
Leave not your friends in such a plight,
As did the man with the theodolite.

URANIUM RADIATION

[CONCLUDED]

THE part of the radiation for the uranium has been found to be approximately homogeneous. With increase of the number of layers of thin metal foil the absorption commences to diminish. This is shown more clearly by using uranium oxide with layers of thin aluminum leaf.

It was found that for the first three layers of aluminum foil, the intensity of the radiation falls off according to the ordinary absorption law, and that, after the fourth thickness, the intensity of the radiation is only slightly diminished by adding another eight layers.

The aluminum foil was .0005 c. m. thick, so that after the passage of the radiation through .002 c. m. of aluminum, the intensity of the radiation is reduced to about $\frac{1}{25}$ of its value. The addition of thickness of .001 c. m. of aluminum has only a small effect in cutting down the rate of leak.

The intensity, however, is again reduced to about half its value after passing through an additional thickness of .05 c. m. which corresponds to 100 sheets of aluminum foil.

These experiments show that the uranium radiation is complex and that there are present at least two distinct types of radiation—one that is very readily absorbed, which will be termed for convenience *a* radiation, and the other of a more penetrative character, which will be termed the *b* radiation.

The character of the *b* radiation seems to be independent of the filter through which it has passed. It was found that radiation of the same intensity and of the same penetrative power was obtained by cutting off the *a* radiation by thin sheets of aluminum foil, tinfoil or paper. The *b* radiation passes through all the substances tried with far greater facility than the *a* radiation.

For example, a plate of thin cover glass placed over the uranium reduced the rate of leak to $\frac{1}{25}$ of its value; the *b* radiation, however, passed through it with hardly any loss of intensity.

Some experiments with different thicknesses of aluminum seem to show, as far as the results go, that the *b* radiation is apparently of an approximately homogeneous character.

The following table gives some of the results obtained for the *b* radiation from uranium oxide.

All the compounds of uranium examined gave out the two types of radiation, and the penetrating power of the radiation for both *a* and *b* radiations is the same for all compounds.

The photographic actions of the *a* and *b* radiations have also been compared. The plates were exposed 48 hours at a distance of 4 mm. from the powdered uranium.

A thin layer of uranium oxide was sprinkled over a glass plate one half of which was covered with a piece of aluminum foil of the thickness necessary to absorb the *a* radiation.

On developing the plate it was found that the darkening of the two halves was not greatly different. On the one half of the plate the action was due to the *b* radiation alone, and on the other to the *a* and *b* radiations together.

Rutherford found that there is a great difference in the power of penetration of the two types of radiation.

The transparency of aluminum for the *b* radiation is over 100 times as great as for the *a* radiation. The opacity of the metals, aluminum, copper, silver, platinum, for the *b* radiation follows the same order as their atomic weights.

Aluminum is the most transparent of the metals used, but glass is more transparent than aluminum for the *b* radiation. Platinum has an opacity 16 times as great as aluminum. For the *a* radiation aluminum is more transparent than Dutch metal or tin foil.

These results do not agree with those of Becquerel who found that copper was more transparent than aluminum for uranium radiation.

The *b* radiation has a penetrating power of about the same order as the radiation given out by an average x-ray bulb. Its power of penetration is, however, much less than for the rays from a "hard" bulb. The *a* radiation on the other hand, is far more easily absorbed than rays from an ordinary bulb, but is very similar in its penetrating power to the secondary radiation sent out when x-rays fall upon a metal surface.

It is possible that the *a* radiation is a secondary radiation set up at the surface of the uranium by the passage of the *b* radiation through the uranium, in exactly the same way as a diffuse radiation is produced at the surface of a metal by the passage of Röntgen rays through it.

Prof. Rutherford also compares the types of radiation by

thorium with uranium. The nitrate and sulphate of thorium were used; the nitrate was the more active. It was found that thorium radiation is different from uranium *a* radiation in penetrating power. The radiator passes through between three and four thicknesses of aluminum foil before the intensity is reduced to less than a half after passing through one thickness of foil.

The cause and origin of the radiation continuously emitted by uranium and the salts still remains a mystery.

All the results that have been obtained point to the conclusion that uranium gives out two types of radiation which as regards their effect on gases are similar to Röntgen rays and the secondary radiation emitted by metals when Röntgen rays fall upon them. If there is no polarisation or refraction the similarity is complete.

Röntgen's and Widemann's results seem to show that in the process of ionization a radiation is emitted which has similar properties to easily absorbed Röntgen radiation. The energy spent in producing uranium radiation is probably extremely small, so that the radiation could continue for long intervals of time without much diminution of internal energy of the uranium.

CARBON WORK FOR AMATEURS

ERNEST HECKROTH

IT seems strange, to say the least, that the greatest of all photographic printing processes after having claimed the attention of the professional trade generally, should finally be left to the amateur to wrestle with. A few years ago it seemed as though the carbon print, after several previous vain attempts, had come to stay, and not only to stay but to lead the line of march. But in this we have been somewhat disappointed; there is no mistake about the fact that (professionally speaking) carbon is not as popular as it has been. There are several reasons for this decline, among them being the cost as compared with the cheap work of which we can see much, also the greatest quantity of carbon prints one would be able to turn out in a day is much less than what could be done with the other processes, then again the new "art in photography" has something to do with its displacement. There is so much of this seen that it looks very much as though photographic interest was

centered on it for the time, and negatives made for this purpose (portrait negatives in particular) are not best adapted to the carbon process, they being made purposely weak with the idea of giving the flesh tint for which the platinotype is better adapted. There are, however, many who still have a liking for the old school in photography and to whom a good crisp negative is as delightful to look at as a glass of crystal water, and it is these in particular I would try to induce to make their prints in carbon.

Carbon printing could certainly not be left in better hands than the enthusiastic amateur who is imbued with the push and care most necessary to be successful. When I say care I do not mean to be careful until the first part is over, but during the entire process. You will find that the most successful worker is the most careful and not the one who has the biggest batch of formulae for working the process. It might be just as well to say right here that no one need be afraid that he cannot succeed because he is not in possession of some secret formulae, for the reason that there are plenty good enough generously given to the public through the various photographic journals to answer all intents and purposes. A few other things which might serve to scare one from trying this process is the uncertainty of judging when the print has been exposed long enough and also the danger (?) of bichromate poisoning. To the first there is to say that after a few trials one will become accustomed to the density of the negative, and with the aid of a "meter" will be able to judge nearly correctly as to time of exposure; the latitude which the process allows will make up for a slight mistake in exposure one way or another. As to bichromate poisoning, some people are more likely to be effected by chemicals than others, but I think I can safely say that anyone who can dabble in the various toning and developing solutions is perfectly safe from bichromate poisoning; care should always be taken, however, to keep the hands free from cuts or scratches. During sensitizing the wearing of rubber gloves will reduce the danger of poisoning to a minimum. Before experimenting with the process it would be well to understand what this carbon tissue is of which you intend (with the aid of a negative) making a picture. Just think for the time being that you have in your hand a piece of paper coated with gelatine into which has been thoroughly incorporated some coloring matter; this gelatine is sensitized with bichromate and when ex-

posed to light becomes insoluble. Should it not be exposed to the light it would remain soluble and by placing it in hot water the gelatine would be entirely washed away, leaving nothing but the piece of paper which supported the gelatine emulsion. Is it not now very plain that having placed a piece of this sensitized tissue under a negative and exposed it to the light it will be soluble in some parts and insoluble in others, providing the exposure has been about correct? Being satisfied that this much is understood we are ready to go on with the process.

First of all the tissue must be sensitized in a solution made up as follows: Bichromate of potash, 3 oz.; ammonia, $\frac{1}{2}$ oz.; water, 100 oz. During the summer months the quantity of bichromate should be a little less. About 100 grains of salicylic acid and 1 $\frac{1}{2}$ or 2 oz. of alcohol may also be added to advantage. If the tissue is rolled very tight, one end may be placed in the solution and rolled up, at the same time unrolling the other end, and so on back and forth until the tissue is just about limp; it is then placed face down on a piece of glass and the excess solution of bichromate removed by means of the squeegee; it is then hung up to dry in a dark room which should have a free current of air and be free from bad odor or gases of any kind. Should the atmosphere be moist a little chloride of calcium in a saucer placed in the drying room would serve to absorb some of the moisture and enable the tissue to dry more readily.

Having sensitized in the evening the paper should be dry the following morning. If the drying room has been damp the paper when dry will be found to be limp; if the air in the drying room has been clear and dry the paper when dry will be hard and perhaps horny; strange as it may seem, this latter state is by far the better to find it in, as in this condition the gelatine is more soluble. It is possible, however, that in cold dry weather, the tissue is so hard that it cannot be conveniently cut, and will not lie in perfect contact with the negative when placed in the printing frame; to remedy this place a pail of water in the drying room and allow the tissue to absorb a little of the moisture therefrom. Still another way out of this difficulty is to place the tissue immediately as it is taken from the sensitizing solution, face down on a sheet of glass which has been thoroughly cleaned and rubbed with powdered French chalk. The tissue is squeegeed on this glass and left to dry; when dry it will come off of its own

accord, or may need a little persuasion which can be given by placing the blade of a penknife under the edge and gently separating the tissue from the glass; the tissue will then present a glossy surface and be as smooth and as easy to handle as any of the high gloss papers; the gloss will not remain during developing.

Having cut the tissue to the desired size we will proceed with the double transfer process. First of all the negative must have a "safe edge." Each edge of the negative must have a strip of opaque paper pasted around it so as to prevent the tissue from printing to the extreme edge; or the four edges of the negative may be painted with some opaque substance, in fact anything that will prevent the tissue from printing to the extreme edge will answer, the idea being to keep the edge of the tissue soluble, thereby giving it a start in developing which will be explained further on. Of course it seems like a good bit of trouble to put this edge around every negative that is to be printed from; however, much of this trouble can be done away with by pasting the safe edge around a piece of glass the same size as the negative and placing it in the printing frame with the negative. This glass can be kept and used as often as desired, and will prevent the disfiguring of negatives as well as saving much time and labor.

The tissue thoroughly dry, is placed in the frame with the gelatine surface to the negative and put in the light to print. As there is no image visible even after the tissue has been sufficiently exposed, we must judge how long to expose the print; this is one thing before spoken of as frightening many from further experimenting with this process. The correct judging is, however, made simple by the aid of the photometer of which there are various kinds in use; and it matters not which one we use so long as we stick to one and do not keep changing continually. About as good a method as any is to make an ordinary print on any "print out" paper from a small negative and judging from it the amount of exposure necessary for the carbon. It may not be amiss to mention that the "meter" or guide and the negative under which the carbon tissue is being exposed, should be placed in light of equal strength. A few trials are necessary at the beginning after which the judging will be quite a simple matter.

Having had the necessary exposure the tissue is placed in cool water until it is just about limp, and should be gently brushed on the face and back thereby removing all the air bells which will form. The length of time for it to be left in this water is not always the same but can be seen by watching the tissue; when first placed in the water it will curl with the coated side in, and as the gelatine swells will gradually become limp, and if left long enough will curl the other way—film side out. Just *before* it is about to curl film outward, is the proper time to remove the tissue and place on the temporary support, which should have been soaked in cool water for about one hour before using or until the water running from the waxed surface will no longer present a greasy appearance. The temporary or flexible support to be had from the stock dealer is simply heavy paper coated with a hardened gelatine emulsion; it may be used repeatedly but must be freshly waxed each time before using, with the following waxing solution:

(a) Benzole, 4 ozs.
Beeswax, 2 dr.

(b) Turpentine, 4 ozs.
Rosin, 6 dr.

Finding oneself without the temporary support a piece of single transfer paper may be waxed and used instead; it is safer and cheaper in the long run, however, to use the regular temporary support. The print having been soaked and placed film side down on the waxed surface of the temporary support is covered with a piece of rubber cloth and squeegeed; it is then hung up, or better still placed between blotters and left for about thirty minutes after which the developing is proceeded with. The tissue, by this time cemented to the support, is placed in a tray of warm water (about 90° Fahr.); the temperature of the water should then be gradually raised by adding warmer water or by means of *moderate* heat beneath the tray. In a little while the coloring matter will commence to ooze from under the tissue; now take the original by one corner and gradually lift from the temporary support being careful during the operation to keep the temporary support (which now supports the tissue) below the surface of the water. Thus far the operation should be conducted by yellow light. You will now see before you a mass of slimy coloring matter which may be gently laved with the warm water, thereby accelerating the

developing. In a short while the soluble gelatine will wash away and the print will appear. It must be borne in mind that the warmer the water is and the longer the developing is allowed to proceed the lighter the print will get. It is obvious then that it is not advisable to commence the developing with very hot water, not only because of the danger of causing blisters but because you lose all advantage of the latitude which this process affords. For instance, should you make a mistake in judging the exposure and think your print is full or overtimed, you commence developing with hot water; you then find out your mistake, the print was slightly under-exposed and had you commenced with moderately warm water you would have in all probability by careful handling brought the print out all right.

After the print has been developed it is rinsed in cool water and placed in a saturated solution of chrome alum until the yellow color, caused by the bichromate, is entirely removed; it is then washed and can be finally transferred, although it is better to allow the print to dry first on the temporary support and then re-wet and transfer. The final transfer paper is soaked in cool water until limp, then placed for one minute in *lute warm* water; it is then placed coated side down on the print which also has been soaked until limp, the rubber cloth is placed over it all and the squeegee is again applied finally, and it is hung up to dry, when the print will separate from the temporary and remain fast to the final support. You will then have the finished carbon print by the double transfer process.

The single transfer process is a much simpler way of making a carbon print, the only objection is that a print made in this way is reversed, but as there are many instances where a reversed print is no objection or where one can work from a reversed negative which will make a correct or unreversed print by single transfer, it may not be out of the way to say a few words in explanation. The operation up to and including the printing is exactly the same as for the double transfer process. The tissue having been exposed is soaked in cool water as before described and placed directly on the single transfer paper, is developed, washed and fixed in the chrome alum bath and washed and hung up to dry. You will then have your finished carbon print by the single transfer process. This process is very simple indeed and I would advise beginners to make a few prints in this way before trying the double transfer process.

Speaking of all these different papers in use in this process is perhaps a little confusing to the experimenter, but I would have you bear in mind that there are only four different kinds that are used. They are the carbon tissue, the "flexible" or "temporary" support, the "final double" transfer paper, and the "single" transfer paper. With the double transfer process the first three alone are used. With the single transfer process the first and last alone are used.

Before I close I would like to say a few words regarding the use of celluloid in carbon printing; it presents many advantages over the paper and I feel it will be of interest to many who have not yet brought it into use. First of all it may be used in place of the temporary support by simply waxing the surface with the waxing solution. Again it may be used for single transfer prints, using the celluloid as the support for the print in which case it has the same effect as porcelain. The transparent sheet gelatine may be used as a substitute for glass in making transparencies. In either case it may be used without any coating whatever, only for use with double transfers is it necessary to wax before using. As the celluloid is free from the many imperfections which paper always contains and as it is much lighter in weight than glass or porcelain its advantages are very evident.

MY EXPERIENCE WITH VELOX PAPER

G. GIBSON

IT is a general practice with me, on opening a package of photographic plates or papers, to throw away the circular containing directions for use. This practice no doubt savors something of presumption and considerably of egotism. The makers of a commodity ought, on general principles, to have the best knowledge of how such materials should be treated. But I have had so little success by implicit reliance on the letter of the directions that I have come to think that anything but that recommended on the circular is preferable.

Now, when I first took up velox paper, and for the nonce did not throw away the directions furnished, having been advised to the contrary by one acquainted with my method of disposing of such matter, I was disgusted with the results and hooted the idea that prints akin to platinum might be obtained. However, I did not drop

the paper in my disgust, but tried what some other method might give.

Those whom I questioned about their experience told me that the trouble lay in determining the amount of bromide in the developer. I never was much of an advocate of bromide, even in development of plates, so, I thought I would hunt up directions, if possible, and see what they said about the use of bromide. I found, as I expected, that the inexperienced worker in bromide paper would naturally, improperly use the salt, and get nasty, green effects for his pains.

Now, velox is really one of the easy working varieties of bromide paper, and I trust the makers of this excellent variety will excuse me for recommending another kind of developer, than the one they give with the package. I am going to recommend the old ferrous-oxalate developer, because the results I obtained therewith are superb; the gradations, rich; the high lights, soft, yet vigorous, and the shadows, deep-black and wonderfully clear; quite equal to the best platinum work, the deposit of silver being much finer than one would expect in comparing platinum-black with silver-black.

Many may object to the ferrous-oxalate developer on account of the retention of the iron in the paper and the necessity of clearing with acid before washing or fixing, but extra care ought not to be grudged if the extra beauty of the finished product is taken into consideration. It is better than having flat, tame, dull pictures, with quick work.

By the following method I have secured a wide range of tones, from velvety black to warm sepia browns:

Make a saturated solution of neutral potassium-oxalate, and be sure to buy the oxalate from those who prepare it for platinum workers. One pound will dissolve in 48 ounces of boiling water. Wait until the solution is cold (be sure of this precaution), acidulate with oxalic acid (100 grains acid to one ounce boiling water) until the piece of blue litmus paper is decidedly red. Filter through paper. Secondly, make the iron solution:

Proto-sulphate of iron (clean bright crystals),.....	2 ozs. troy.
Citric acid,.....	100 grains.
Water,.....	8 fl. ounces.

Generally the iron needs no filtration.

This developer, in separate solutions, keeps for months, and even mixed will keep clear for some time, so that a number of prints may be developed in the same solution and the developer be put aside corked, to be used as old developer for over-timed exposures.

If dense-black prints are desired, give full exposure (which means, try a strip of paper on the negative) and develop with four ounces oxalate, one ounce iron, adding the iron (be sure of this) to the oxalate, and two ounces water.

For sepia tones a longer exposure, about 50 per cent. more; and two more ounces of water to the developer. After the image has come up to the required degree without washing the print, plunge it immediately from the developer into an acid bath, either oxalic or acetic acid,— $\frac{1}{2}$ ounce solution of acid to quart of water. A second bath of acid water and a good wash before fixing in the hypo. is all that is necessary, (one part hypo. ten parts water).

I do not use bromide at all, so I have no trouble with green tones.

CLOUDS IN THE PHOTOGRAPH

VALENTINE BLANCHARD

“**T**HE various effects of cloud and sky which may be introduced in landscape photography afford a vast scope for the display of the art capacity of the operator. He can, by a well-chosen effect, bring an otherwise unimportant and somewhat tame distance into better keeping with the remainder of the picture; he can by its means supply a deficiency in some of the most important lines of composition; or he can, especially in pictures with figures in the foreground, use an effect of cloud or atmosphere to give not only relief to the principal object, but to correct the foreground and the distance; for although the sky is really behind the picture, still it may form the connecting link between any two grades of color or masses of light and shade.”

Thus writes H. P. Robinson in *Pictorial Effect*; and his well-known works, where clouds are all-important for artistic effect, thoroughly prove the truth of his dictum cited above. Clouds are everything to the landscape painter, and are equally important

to the photographer. Imagine a picture by Vicat Cole or Leader without clouds. The author of "The Sketcher," a series of articles in *Blackwood* many years ago, ably puts the case at follows:—"Clouds are to the heavens what human beings are on earth—their inhabitants. They dwell in and move about them at pleasure, or on important missions either of peace, love and gentleness, or of awful punishment. The great masters knew this, and the cloudless sky of Italy is not to be found in their works. Even Claude, whose skies are so beautiful, never trusts one to the eye without a cloud; he would have introduced them, if on no other account, to help the perspective."

A photograph may owe all its success to the artistic introduction of clouds, or may be completely marred by their introduction in a bungling or inartistic manner. Artistic knowledge is essential to their right employment.

There has been a great advance in the art quality of recent exhibitions, but occasionally one sees an expanse of heavy clouds over the water so calm as to be without a ripple, and yet there is no indication of them in what should be a mirror-like surface, but which by contrast looks more like snow than water. At a distance the picture looked top-heavy, and one could almost imagine the frame had been hung upside down.

The recent craze for evening effects on vast areas of muddy shore is on the wane. The outcome has been a feeling of heaviness in the pictures recently exhibited, which made the beholder sigh for a little of the brilliancy of the midday sun. The prevailing fault is still a tendency to print in the clouds too dark, and thus destroy the aerial perspective so necessary in a good landscape.

The necessity for true perspective in the clouds introduced into the picture cannot be too strongly enforced upon the operator: that is to say, their perspective must agree with the perspective of the landscape, for where proper attention has not been given to this important point, the oddest effects have resulted. In working for cloud negatives the camera is pointed upwards, probably to escape some obstructions, such as trees, telegraph poles, etc., and in consequence the clouds nearly overhead are reproduced, but these when printed into an open landscape are altogether incongruous; and thus instead of a glorious perspective of clouds gradually receding, until in the extreme distance they lose form and melt in the horizon, a mass appears, too large

and too strongly defined for the subject, and naturally aerial perspective is conspicuous by its absence.

If the camera, when looking at the scene, is in a horizontal position and is afterwards pointed at an angle of 45 degrees when taking the clouds to be introduced, what can result but such an effect as I have described?

Whenever possible—that is to say, whenever there are clouds suitable to the subject—it is well to take two negatives, one for the landscape and one for the clouds. In the first the full exposure, so as to secure proper detail in foreground should be given; whilst in the second the most rapid of snap-shots will be sufficient to secure detail in even the most delicate clouds. When this latter negative is developed of course no proper detail in the landscape can be expected, but the proper combination of these two negatives will produce a perfectly harmonious result, particularly if the right effect has been patiently awaited for. It sometimes happens that the combination of cloud and landscape is most striking; in such a case blaze away with all the enthusiasm that such a subject demands, but as a rule the patient worker is the one who gets the greatest reward for his labors.

Frequently the sky forms only a small portion of the picture, and thus naturally the clouds do not play such an important part; if, therefore, they are suitable in form so as to help the general effect and break the monotony of a plain sky, enough has been done, and the printer has not been seriously tasked; but in an extensive landscape, or more particularly, in a marine picture, the most perfect artistic skill will be needed to make a successful combination of clouds and subject. What, for instance, can be more offensive to anyone of taste than to see the sparkle of sunlight here and there on rippling water and yet overhead clouds so placed as to render sunlit water absolutely impossible. The use of clouds with the light on them in a totally different direction to that employed when taking the landscape is an equally grave fault. Ordinary observers may pass these blunders without notice, but they are glaring defects to the cultured eye. Unfortunately the results of such misapplication of clouds are far too frequent in the various exhibitions, and they cannot be too strongly condemned. Having pointed out some of the most glaring faults, which it is to be hoped may be regarded as danger posts warning the unwary what to avoid, I will now go on to

ways and means, and endeavor to show the amateur the best method of printing clouds into his landscapes. Let no printer make the serious mistake of employing the same cloud negative in a number of different landscapes. This blunder has been frequently committed by those who certainly know better, but who were too indifferent or too lazy, and therefore did not take the trouble to have a sufficient number of negatives to select from.

Many of the dealers have a large selection of waxed paper cloud negatives, and these have the advantage that they can be used on either side, so that for all morning or late afternoon effects when the sun is low and the shadows in consequence become elongated, if a suitable one be selected it can be used from the right or the left according to the requirements of the case; but it must be remembered that morning and evening clouds do not usually resemble each other, and great judgment is therefore needed in order to secure harmony. There is also another important point to bear in mind; the angle of shadow must be the same in the landscape and the cloud negative. It will never do to have the light nearly vertical in the cloud negative, and introduce this in a landscape with long evening shadows. And yet such things have been done.

[TO BE CONCLUDED.]

SCIENTIFIC NOTES

In our January issue we printed a communication from Mr. Gibson on the use of uranium persulphate for toning gelatine paper prints. The use of uranium, as the contributor remarks, as a toning agent is not new, but its application to aristo prints, we believe, is original with Mr. Gibson. In connection with uranium toning, we think the communication of M. L. P. Clerc, to the Société Française de Photographie, on the employment of the salts of uranium, will be read with interest.

We are indebted, for a synopsis of the communication, to the *British Journal of Photography*, (Feb. 10):

"M. Clerc states that there are two ferri-cyanides of uranium and potassium, one of which is quite soluble in water and which only precipitates after standing some considerable time; the other insoluble in water, but soluble in alkaline carbonate, sul-

phocyanides, and alkaline ferrid-cyanides. When a silver print or negative is placed in a mixture of ferrid-cyanide and a uranium salt, ferri-cyanides of silver and uranium are formed; the former in white and opaque, and the latter colored, and, if the uranium salt is in excess, the color of the latter is brown; but, if the ferrid-cyanide is in excess the color is red. In order to obtain the brown image, solutions of ferrid-cyanide of potassium and nitrate or acetate of uranium should be made up of equal strength and mixed in the proportion of ferrid-cyanide 50 parts, acetate 75 parts, or nitrate 90 parts. If the red color is wanted, then the proportions should be ferrid-cyanide 50 parts, acetate 60 parts, or nitrate 70 parts. Sepia tones may be obtained with great ease by merely weakening the bath, and M. Clerc states that in all cases one per cent. of the salt is the best strength. It is always advisable to wash in water acidulated with about $\frac{1}{10}$ acetic acid, and, should on drying the whites of the print become stained, this stain can be instantly removed by plunging the print into water heated to 60°, which will instantly dissolve the gelatine where there is no image, but leave the image intact."

NEWS ITEMS

The Photographic Society of Philadelphia has resumed the publication of its proceedings and we are in receipt of the January number of *The Journal*. We are glad to learn that this, the oldest separate photographic organization in America, has determined to make public the valuable papers, scientific discussions, and other matters of interest to photographers, presented at its meetings.

The Journal is the official organ of the Society, and one of the reasons for publication is to promote and encourage among its members a desire to improve in the art. No profound knowledge is required of its members, and the expert and novice, amateur and professional, meet on a common plane for mutual improvement and interchange of experience. In addition to an admirable technical library, always open to members, the Society's facilities comprise a fully equipped operating department, supplied with all the necessary appliances for the ordinary photographic manipulations, as well as the making of lantern slides and enlargements. The portrait studio, on the first floor

above the main rooms, has a modern "single slant" skylight of the most approved construction, as well as the necessary cameras, lenses and other accessories. Visitors are always welcome at meetings.

The management for 1899: President, Robert S. Redfield, Wayne, Pa.; Vice-Presidents, George Vaux, Jr., 404 Girard Building; Walter P. Stokes, 219 Market St.; Secretary, Edmund Stirling, care *Public Ledger*; Treasurer, Anthony W. Robinson, 409 Chestnut St.

Philadelphia Photographic Salon, 1899.—The Pennsylvania Academy of the Fine Arts has the honor to announce that under joint management with the Photographic Society of Philadelphia, the Philadelphia Photographic Salon for 1899 (second year), will be held in the galleries of the Academy, from October 22 to November 19, 1899.

The success of the first Salon has conclusively demonstrated the existence of a field for an American exhibition devoted exclusively to pictorial photography in its highest sense. The aim of the Salon is to show only such pictures produced by photography as may give distinct evidence of individual artistic feeling and execution, rigidly selected by a jury composed of well-known artists and artistic photographers, whose certificate of acceptance shall be the only award.

All those interested in the purpose of the Salon are invited to give it their cordial support and encouragement, both by submitting specimens of their best recent work and by making it favorably known to others.

This preliminary notice will be followed in due course by a full circular, with all details, entry forms, etc.

Display of Work of the Boston Camera Club at the Rooms of the Photographic Society of Philadelphia, February.—The display of photographs made by the members of the Boston Camera Club contained more than the average number of interesting subjects usually found at such exhibitions, and also fewer poor ones. In fact there were two or three instances of an advance in artistic treatment over recent exhibits by the Club. Impressionism, whether in its genuine or in its imitative form (which, if anything, is worse), had no representation; while, on

the other hand, there were many pictures of high technical excellence which showed much feeling for art in their conception.

Figure subjects and genre composition were well represented and some excellent portrait work. Landscape, too, had a number of strikingly good examples. We would like to enter into special examination of the pictures, but our space forbids. The whole exhibit showed much careful study and earnest endeavor to produce good work and the general effect, as a consequence, was very pleasing.

We always read with interest the excellent papers printed in the *Amateur Photographer* (London), and enjoy the reproduction of artistic work with which its pages are enlivened. The Feb. 10th issue is especially fine. There are among other pictures, two of still-life groups, representing composition of fruit and and vegetables—difficult subjects to compose, as we know from experience—yet, the artists, E. W. Burch and A. W. Curtis, have succeeded in arranging most charming groups, which make us long to see the originals.

We learn with regret, from the pages of *Photography* (London), that Mr. W. K. Burton has been some time at Formosa dangerously ill, but we are glad, also, to find that he has so far recovered as to give the readers of *Photography* (Feb. 23rd), a valuable paper on "Inequality of Illumination," a subject about which a good deal has been written, but not always in the clear and explicit manner in which Mr. Burton presents the matter. We recommend the paper to all who are desirous of learning something new and of importance in connection with the subject of lenses.

We also notice, in looking over the pages of *Photography*, that the editors have introduced illustrations, which add to the interest of the paper.

The demand for Dekko Paper, of the Eastman Co., is growing rapidly in England and in this country. It is that variety of slow bromide paper which makes it possible to manipulate with the light of a gas flame, yet having rapidity enough to be independent of daylight exposure.

We have not yet had opportunity of trying this paper, but hope presently to do so. The beautiful examples which we have

seen are evidence of its importance. Some of the effects produced are strikingly like carbon. We are told that it is not difficult to manipulate, and with a reasonable amount of care (which all good things demand) a wide range of colors may be secured by variation of developer. The paper recommends itself to the amateur on account of the ease with which it may be worked and the assurance of success, if directions are carefully followed.

The facility of judging of tones in the developed print, by reason of the operation being possible in subdued white light is a great advantage. We shall presently advise our readers of our experience with the Dekko paper.

For the purpose of securing orthochromatic values the Karma Ray Filter, Karma Photo Mfg. Co., Chicago, Ill., will be found of great value. It is simple in construction consisting merely of a thin sheet of mica, stained a uniform yellow color, mounted in a neat polished brass disk which is intended to cover the aperture of the lens. Any depth of color may be obtained by extra disks of the colored mica which may be superimposed.

The Ray Filter is especially useful in photographing flowers, in securing the values in paintings, in getting clouds in sky scenes, and in many other subjects. The same Company also manufactures the Karma Mats, which furnish a neat and convenient method of mounting. The print needs no trimming but is squeegeed directly to the Karma Mats which are made in a variety of shapes.

The Scovill & Adams Co., N. Y., have put upon the market the developing agent, Pyrocatechin, made by the process recommended by Dr. Ludwig Ellon, of Charlottenburg, Germany. *The Photographic Times*, for Nov., 1898, gives the formulæ recommended by Drs. Eder, Vogel, and other authorities.

The price has been greatly reduced, so that it may be now obtained at about the cost of the other developing agents. According to Dr. Arnold: "It is the ideal developer, for it renders it absolutely impossible to fog a plate; the solution is in itself non-actinic. The plates lose their sensitiveness to light as soon as they are immersed in the developing solution, and may be developed at a distance of twenty inches from a gas flame, or in weak daylight. Other advantages are, simplicity in preparation, high energy at low temperature, and a negative color which